D & D SUBGROUP HIGHLIGHTS
February 9, 1999

This meeting was held in the EESB Chinook Room. The meeting began at 9:00 a.m.

NUCLEAR FUEL SERVICES (NFS) INC. PRESENTATION

Steve Schutt and Steve Best of NFS presented information on the Decontamination and Volume Reduction System (DVRS) work being done by NFS. NFS has been in business since 1957 and was involved in the development of the nation's first commercial reactor fuel. In the past, NFS fabricated Pu and MOx fuel for DOE tests and also worked with U and Th metal at the Tennessee facility. Today NFS serves as the nation's sole source of advanced fuels for the U. S. Navy's fleet of nuclear-powered surface vessels and submarines. A viewgraph of the NFS facilities in Erwin, Tennessee was shown and the MW storage facilities and lagoons were pointed out. NFS also developed the first fuel transport cask and ran the West Valley operations. NFS has developed the DVRS at its Erwin site to clean and compact TRU and low-level radioactive contaminated equipment. In addition to the DVRS at its Tennessee facility NFS also offers an integrated approach to Pu/TRU D&D at other sites. A video was shown highlighting two projects completed recently by NFS. The first project was at the MOx fuel fabrication facility at the NFS plant. Production halted in 1979 and work was done to decontaminate the building so it could be reused. The low level waste (LLW) was separated from the high level TRU waste and the LLW was compacted and placed in drums for disposal. The small percentage of TRU waste was sent to ORNL for storage. The second completed project was the removal and decontamination of glove boxes at an ANL building. Sixty glove boxes contaminated with Pu and other actinides were removed, decontaminated, and volume reduced. Over 100,000 pounds of radioactive material was packaged and shipped offsite in 12 weeks. Over 85% of the waste was LLW and the TRU portion was shipped to Hanford for storage. NFS is now working on two D&D projects: an ASTD project to clean up metallic TRU waste at LANL and removing the NFS MOx building and contaminated soil around it.

The rest of the viewgraph presentation by NFS personnel dealt with the approach the D & D work has taken, by NFS, for jobs they perform. One of the first things to consider is the location of the work including the infrastructure, utilities, physical constraints, and if ongoing operations will be continuing during the D & D work. The next step in the process is to determine material disposition goals and objectives. This will include any resource recovery to be made, the level of decontamination needed, if size or volume reduction is possible, how the waste will be packaged, waste types and where they will be sent for final disposal or storage. After determining the end state you want to achieve you can then determine a budget and schedule the work to be done. At this point, examine the trade-offs involved including the use of capital versus labor. Multiple shifts have been shown to increase overall productivity in D&D work. NFS has found that D&D work has been very labor intensive and thus the personnel employed in the work are the critical element including both the D&D technicians and project management/engineering.

An initial baseline characterization of the site to be worked on should be performed including information on the following: isotopes, holdup, materials of construction, mixed waste, equipment, ventilation and volume estimates. After the baseline characterization is completed a generic process flow diagram or chart of the work to be performed can be constructed listing all tasks to be completed. An example of such a diagram was shown starting with the waste as it now exists and ending with the waste packages for disposal. As more data is obtained the diagram can become more complete and a system design can be done. In addition to the usual system design components that need to be included; such as equipment layout, utilities, ventilation, etc; NFS has developed NDA systems to meet WIPP and other WAC's. Try to keep all the support systems such as staging areas, maintenance and tool shops, etc. in the main facility when the work is being done, to reduce the time going in and out of the facility.

Procedures for operations, as well as health and safety, should be as flexible as possible because each job and even each glove box may be very different. An example of the type of procedures by the scope of work was shown. The health and safety goals and objectives that NFS uses were shown and include limiting exposure both internal and external, having flexible plans, and performing real-time monitoring. NFS has three training classes that all personnel take. These include classroom as well as on the job training in a cold and hot environment. The total training time is 80 hours per technician and teamwork is stressed throughout. The goal is to eliminate the bad apples before the work starts rather than have problems during the D&D work. The D&D teams are composed of two shifts of workers that work 10 hour shifts with a one hour meeting between shifts each day. This meeting allows each team to learn from each other. NFS tries to maximize the use of proven systems from long-time vendors in its operations. The idea is to keep it simple and not reinvent the wheel for each job. In some of the D&D work there is a significant learning curve that can be safely overcome by working smart and passing the lessons learned on the job to others on the team. This allows for a continuous improvement process to take place thus improving productivity significantly.

ER LONG – RANGE PLANNING AND TIPS

Mark Watson, BHI, presented information on the long-range planning process used by the ER program. Mark had handouts that described the planning process, the prioritization logic, and the final long range plan arrived at. This is an annual process that results in the Multi-Year Work Plan. Mark reviewed the steps in the planning/budgeting process in detail and how the various planning documents fit together. The prioritization logic used in this process is developed with the regulators and DOE. The resulting long range plan is also reviewed with the regulators and their comments are incorporated into the revisions. Detailed work plans are then developed that cover the next three years of ER work. Again the regulators are involved in this process both in workshops prior to the detailed work plans being written and with reviews and revisions to the work plans. The D&D future forecast waste numbers are based on BEMR estimates. There are also six TIPs in the current Long Range Plan. The detailed work plan effort will start in June for the next three years of work to be done. Starting in September work will begin on defining the work to be

done in the years more than three years out. A question was raised as to how the plan is adjusted to fit budget changes. Mark stated that they go back to the regulators and readjust the TPA milestones to match the funding available.

Jerry White talked about the Technology Insertion Point (TIP) process and how it folded into the ER Planning activities that Mark just discussed. There are 6 TIPs identified in the ER Plan and these were identified during the development of the detailed work plans. TIPs identification requires a look out into the future of 3 to 5 years. One problem is that the projects usually look out only 3 years and not longer. Only technologies that made a significant improvement in the project were examined. Information on TIPs from a December 18 meeting was distributed by Jerry. A TIP will become an RL milestone. There is a need to schedule the R&D enough ahead of time to meet the TIP scheduled time when it is needed. The Implementation Plan being developed for each TIP will be used to plan this. Jerry is responsible for working with the projects to look out further into the future to plan for TIPs. In some cases the projects will need more funding to implement new technologies. Technology needs statements will also have TIPs identified in them as well as the Long Range Work Plans. Guidance will be issued on TIPs in April/May as part of the Budget Update Guidance (BUG).

ASTD UPDATE

Dennis Brown reported that the Robotics Cross-Cutting and D&D Focus Areas have agreed to fund the $ 1.544 million ASTD robotics platform work. The deployment plan was done last Thursday and the funding should arrive in March to start work in the 324 Building. Hanford is also working with the Nevada Test Site (NTS) and LANL on an ASTD project involving using the laser cutter to D&D waste boxes and glove boxes throughout the DOE Complex. The laser cutting system will be used at NTS first, then at Rocky Flats and finally here on glove boxes.

CDI UPDATE

Kim Koegler reported that some work had to be put on hold due to the need to upgrade the canyon crane to meet electrical specifications. The AIL gamma camera system is here that will be used to measure dose levels but is waiting on the cranes availability. A DDFA representative was here last week to review the proposals received so far at FETC. The technical review is being done on the proposals now. There are six CDI related proposals in the group. AEA is looking at funding the use of a manipulator in the canyon. A functional performance requirements (FPR) document will be written beginning in late February. The FPR should be finished in late June or early July.

D&D PROGRAM AREA INTEGRATION TEAM (PAIT) UPDATE

Jim Goodenough updated the subgroup on the efforts of this EM-40 effort that cuts across all DOE sites. There is funding available this year for projects that have complex-wide applications. Proposals are being written and submitted to the PAIT team to select from. A decision support document is due to be done at the end of the week to aid the team in this effort. The Core PAIT Team is meeting on February 24 and the Executive Committee on March 17. A funding proposal for CDI is one being written here at Hanford as well as

robotics work that will fit in with the ASTD funding. These proposals are being done in conjunction with other DOE sites.

HANFORD SCIENCE AND TECHNOLOGY (S&T) NEEDS PROCESS

Greg Berlin discussed this year's efforts by the STCG Management Council to improve the S & T needs identification process. Greg distributed and reviewed the schedule for this year's needs assessment. Greg will make sure all subgroup members receive a copy of a letter from John Wagoner to the DOE-AMs concerning the S & T needs process. In addition, Greg will have copies of the requirements for the S & T needs statements issued by DOE-HQ sent to the subgroup. This year each need will require signatures of three managers at FDH. According to this year's schedule the subgroup has from April 15 to May 30 to review and concentrate on the needs for their area. Some of the changes to the needs statements requested from DOE-HQ include a priority rating system leased on the ACPC, a choice of four categories into which the need will be placed, identification of the waste stream(s) associated with the need, and identification of any TIPs involved. This year any graphics, photos, or video clips available to aid in describing the need are encouraged and will be put on the CD ROM disk to be made from the needs statements.

DDFA UPDATE

Shannon Saget has received a copy of the Multi-Year Program Plan for FY 1999-2003 for the DDFA dated December 1998. A copy will be sent to all subgroup members for their review. Hanford D & D needs are linked to the DDFA product work packages in this document. The budget and priority list in this document is being updated now. The National Academy of Sciences (NAS) reviewed the DDFA Large Scale Demonstration Projects and just released a report. The report was very critical of the projects. The DDFA has put together a notebook that responds to the NAS report. Jim Goodenough and Jerry White will be attending the Waste Management 99 meeting in Tucson, Arizona on February 28 – March 4. The DDFA will have a booth at the event. Jim is co-chair of a session at the conference and will report back to the subgroup on the event. He will take copies of the Hanford S & T Needs CD to the event to distribute to interested parties.

D&D Subgroup Meeting Attendees 02/09/99

Greg Berlin	FDH - TM	(509) 372-4352
Steve Best	NFS Inc.	(303) 770-5162
Bill Bonner	PNNL	(509) 372-6263
Ron Borisch	BWHC	(509) 372-3382
Dennis A. Brown	DOE/STP	(509) 372-4030
Gary Ballew	Pacific Rim	(509) 946-0611
Sue Garrett	PNNL	(509) 372-4266
Jim Goodenough	USDOE-AME	(509) 376-0893
Doug Huston	Oregon Office of Energy	(503) 378-4456
Bob Julian	Ecology	(509) 736-5702
Kim Koegler	BHI	(509) 372-9294
David Langstaff	DOE-RL/AMF	(509) 376-5580
Shannon Saget	DOE-RL/AMT	(509) 372-4029
Steve Schutt	NFS Inc.	(678) 947-4903
John Stanfill	Nez Perce Tribe	(208) 843-7375
Mark Watson	BHI	(509) 372-9503
Steve Weakley	PNNL	(509) 372-4275
Jerry White	BHI	(509) 372-9724